

REMARKS

In response to the pending Office Action, no amendments have been made. Claims 1-6 are pending, according to the Supplemental Amendment filed April 13, 2006. Claim 1 is independent.

Claims 1, 2, and 4 were rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Abe (U.S. Patent Publication 2002/0021725). Applicants traverse this rejection.

Claim 3 was rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over by Abe (U.S. Patent Publication 2002/0021725) in view of case law regarding optimum or workable ranges. Applicants traverse this rejection.

Claims 5 and 6 were rejected under 35 U.S.C. § 103(a) allegedly as being unpatentable over by Abe (U.S. Patent Publication 2002/0021725) in view of Honda et al. (U.S. 6,885,076). Applicants traverse this rejection.

Claim 1 is the only independent claim, and recites, “wherein the first and second electrode pads are formed to extend farther behind the two-beam semiconductor laser element, **and are wire-bonded behind the two-beam semiconductor laser element.**”

As an illustrative and non-limiting example of claim 1, FIG. 2 of the application clearly indicates a wire 14 bonded to the first electrode pad 64, and a wire 16 bonded to the second electrode pad 65, both wires are behind (on the non-emitting side) of the two-beam semiconductor laser element. Also see FIG. 1 for a different view.

As is well known, anticipation under 35 U.S.C. § 102 requires that “each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ 2d 1051, 1053 (Fed Cir. 1987). The elements must be arranged as required by the claim. *In re*

Bond, 910 F. 2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990). At a minimum, the cited prior art reference does not disclose (expressly or inherently) or suggest the above recited highlighted (bolded) element.

The Office Action, at page 2, asserts that all the elements of claim 1 are allegedly disclosed by Abe. Specifically, the Office Action, interprets Abe FIG. 7 as disclosing first and second electrode pads (13a). Note that Abe FIG. 7 is similar to FIG. 6 (prior art) in the application, especially the first electrode pad 64 and the second electrode pad 65 in FIG. 6 of the application.

However, the Office Action, at pages 2 and 3, states, “the first and second electrode pads are formed to extend farther behind the two-beam semiconductor laser element (**electrode 13a has been extended behind the laser diode 14a, shown in figure 8A**) and are wire-bonded behind the two-beam semiconductor laser element (shown in figure 8a) (paragraph [0131]-paragraph [137]).” **Applicants disagree with this interpretation of Abe FIG. 8a.**

The electrode pads 13a in FIG. 7 of Abe are labeled and clearly shown, but are **not labeled and are not clearly shown in FIG. 8A of Abe**. In FIG. 8A, the electrode pads 13a apparently should be located to the sides of monolithic laser diode 14a (LD1, LD2), and should be located underneath the two wires on the sides of monolithic diode 14a, as clearly shown in FIG. 7.

FIG. 8A does have two wires located behind the monolithic laser diode, but these two wires appear connected to the pin diode 12, and are **not** connected to the first and second electrode pads of the monolithic laser diode. One of these two wires is labeled 23.

The apparent confusion in the Office Action appears to be caused by paragraph [0137] of Abe, which states, “Furthermore, a terminal 22 is provided passing through the base 1 and

connected by a lead 23 to the above first and second laser diodes (LD1 and LD2) **or to the PIN diode 12.”**

Applicants believe that the configuration shown in Abe FIG. 8A is that the lead 23 is connected to the PIN diode 12 (see bolded portion of paragraph [0137] above). Thus, Applicants believe that the Office Action is **improperly interpreting FIG. 8A of Abe as a lead 23 connected to the first and second laser diodes**, in view of the ambiguous paragraph [0137] of Abe.

In other words, Applicants believe that the above portion of paragraph [0137] should be interpreted as follows: “[i]n a first configuration, a terminal 22 is provided through the base 1 and connected by a lead 23 to one of the above first and second laser diodes (LD1 and LD2). This first configuration is not shown. In a second configuration, the terminal 22 is provided through the base 1 and connected by a lead 23 to the PIN diode 12. This second configuration is shown.”

Additionally, Abe actually teaches away from the invention of claim 1. Specifically, the leads 13b and 13c of Abe are wire-bonded at the sides of the two-beam semiconductor laser, and this configuration makes it impossible to reduce the lateral width of the mount. As an illustrative and non-limiting example of claim 1, the wires connected to the two-beam semiconductor laser element are wide-bonded at its rear, and this configuration makes it possible to reduce the lateral width of the submount. Further, Abe is merely directed to a photodetector.

Thus, Applicants submit that claim 1 is not anticipated by Abe. Further, the other cited art does not remedy the deficiencies of Abe.

Under Federal Circuit guidelines, a dependent claim is allowable if the independent claim upon which it depends is allowable because all the limitations of the independent claim are

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contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819 F.2d at 1100, 1108 (Fed. Cir. 1987).

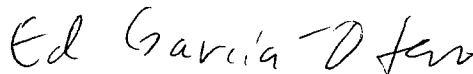
Thus, as independent claim 1 is allowable for the reasons set forth above, it is respectfully submitted that dependent claims 2-6 are allowable for at least the same reasons as their respective base claims.

Accordingly, it is urged that the application is in condition for allowance, an indication of which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, Examiner is requested to call the undersigned attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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